AMENDMENT TO CLAIMS

Claim 1. (Currently amended) An isolated nucleic acid sequence encoding *Arthrobacter* hsp70 protein~~, or a fragment thereof~~.

Claim 2. (Currently amended) [[An]] The isolated [[hsp70]] nucleic acid sequence according to claim 1 wherein said nucleic acid sequence is isolated from ~~which is from~~ the *Arthrobacter* strain deposited under accession number ATCC 55921.

Claim 3. (Currently amended) An isolated nucleic acid sequence comprising the nucleic acid sequence of SEQ ID NO:1, or a fragment thereof which encodes amino acid 162 to 365 of Hsp70, or a sequence having at least 85% homology thereto, or a sequence which under stringent conditions hybridizes with the sequence of SEQ ID NO:1.

Claim 4. (Currently amended) A chimeric nucleic acid sequence comprising the isolated nucleic acid sequence of ~~any of claims 1 to 3~~ Claim 3 fused in-frame to a heterologous coding sequence.

Claim 5. (Currently amended) A chimeric nucleic acid sequence according to claim 4, wherein said heterologous coding sequence encodes an antigen ~~from an animal pathogen~~ from the group consisting of bacteria, virus, fungus, protozoa, nematode, tumor, and a combination thereof.

Claim 6. (Original) A chimeric nucleic acid sequence according to claim 5, wherein said antigen is IPNV VP2 or VP3.

Claim 7. (Currently amended) A DNA expression vector comprising the nucleic acid sequence of ~~any of claims 1 to 6~~ Claim 3, wherein said nucleic acid sequence is operably linked to a transcriptional regulatory sequence.

Claim 8. (Original) A host cell transformed with the DNA expression vector of claim 7.

Claim 9. (Currently amended) An isolated *Arthrobacter* hsp70 amino acid sequence~~, or a fragment thereof~~.

Claim 10. (Currently amended) [[An]] The isolated hsp70 amino acid sequence according to claim 9 wherein said nucleic acid sequence is isolated from ~~which is from~~ the *Arthrobacter* strain deposited under accession number ATCC 55921.

Claim 11. (Currently amended) An isolated amino acid sequence comprising the amino acid sequence of SEQ ID NO:2, ~~or an immunogenic fragment thereof;~~ or the sequence from amino acid 162 to 365 thereof; or a sequence having at least 85% homology thereto~~; or a derivative thereof~~.

Claim 12. (Currently amended) [[An]] The amino acid sequence ~~according to any of claims 9 to 11~~ of Claim 11 which is covalently or non-covalently linked to a heterologous molecule to form a conjugate molecule.

Claim 13. (Original) An amino acid sequence according to claim 12 wherein said conjugate molecule is a fusion protein.

Claim 14. (Currently amended) An amino acid sequence according to claim 12 ~~or claim 13~~ wherein said heterologous molecule is an antigen from the group consisting of bacteria, virus, fungus, protozoa, nematode, tumor, and a combination thereof. ~~selected from bacterial, viral, fungal, protozoan, nematode and tumour antigens.~~

Claim 15. (Currently amended) An amino acid sequence according to claim 14 wherein said antigen is ~~any of the following proteins from ISAV:~~ a ISAV protein selected from the group consisting of nucleocapsid protein; hemagglutinin; polymerase; segment 7 P4 protein; segment 7 P5 protein; and a combination thereof. ~~and segment 7 P4 and P5 proteins.~~

Claim 16. (Currently amended) An isolated amino acid sequence encoded by the nucleic acid molecule of Claim 3 ~~any of claims 1 to 6~~.

Claim 17. (Currently amended) An isolated nucleic acid molecule encoding the isolated amino acid sequence of Claim 11 ~~any of claims 9 to 15~~.

Claim 18. (Currently amended) A vaccine composition comprising ~~the nucleic acid molecule of any of claims 1 to 6, or the DNA expression vector of claim 7, or the amino acid sequence of any of claims 9 to 15, or an *Arthrobacter* cell extract enriched in hsp70, and a pharmaceutically acceptable carrier.~~ recombinant Arthrobacter Hsp70.

Claim 19. (Currently amended) [[A]] The vaccine composition according to claim 18 further comprising ~~at least one heterologous antigen or a nucleic acid sequence encoding a heterologous antigen.~~ an antigen wherein said antigen is from the group consisting of bacteria, virus, fungus, protozoa, nematode, tumor, and a combination thereof.

Claim 20. (Original) A kit comprising a vaccine composition according to claim 18 and a heterologous antigen or a nucleic acid sequence encoding a heterologous antigen, for separate, sequential or simultaneous administration, wherein said an antigen is selected from the group consisting of bacteria, virus, fungus, protozoa, nematode, tumor, and a combination thereof.

Claim 21. (Cancelled)

Claim 22. (Currently amended) A method of adjuvanting a vaccine comprising mixing a vaccine antigen with an amino acid sequence ~~according to any of claims 9 to 11~~ of Claim 11.

Claim 23. (Currently amended) An antibody raised against the amino acid sequence of ~~any of claims 9 to 15~~ Claim 11.

Claims 24-30. (Cancelled)

Claim 31. (New) A vaccine composition comprising the DNA expression vector of Claim 7 and pharmaceutically acceptable carrier.

Claim 32. (New) The vaccine composition of Claim 31 wherein said DNA expression vector further comprises a heterologous coding sequence encoding an antigen wherein said coding sequence is operatively linked to said nucleic acid sequence of Claim 3 and wherein said antigen is from the group consisting of bacteria, virus, fungus, protozoa, nematode, tumor, and a combination thereof.

Claim 33. (New) A method of preventing a disease in fish comprising administering to said fish the vaccine composition of Claim 32.

Claim 34. (New) A method of preventing a disease in fish comprising administered to said fish the vaccine composition of Claim 19.